FEN

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE ATTY. DOCKET NO. 73674-4 (RAB:DMW:rld)

In re Patent Application of Saaed Gazor

Serial No.

10/736,697

Filed: December 17, 2003

or 2 5 2004

Group Art Unit: 3632

Examiner:

For:

METHODS AND SYSTEM TRACKING OF AMPLITUDES, PHASES AND

FREQUENCIES OF A MULTI-COMPONENT SINUSOIDAL SIGNAL

INFORMATION DISCLOSURE STATEMENT

This Information Disclosure Statement is being filed in the manner prescribed by 37 CFR 1.97(b)

- (d) to satisfy the duty under 37 CFR 1.56 to disclose to the Office information, known to

individuals associated with the filing and prosecution of the subject application, which is

material to the examination of the application.

In accordance with 37 CFR 1.97(g) and (h), this statement is not to be construed as a

representation that a search has been made or an admission that the information cited herein is, or

is considered to be, material to patentability as defined in 37 CFR 1.56(b).

This Information Disclosure Statement is being filed within three months of the filing date of a

national application; within three months of the date of entry of the national stage as set forth in

37 CFR 1.491 in an international application; or before the mailing date of a first official action

on the merits and therefore applicant respectfully requests consideration under 37 CFR 1.97(b).

I hereby certify that no item of information in the Information Disclosure Statement filed

herewith was cited in a communication from a foreign patent office in a counterpart foreign

application or, to my knowledge after making reasonable inquiry, was known to any individual

designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information

BEST AVAILABLE COPY

In compliance with 37 CFR 1.98(a)(2), also enclosed is a legible copy of:

- i) foreign patent;
- ii) each publication or that portion which caused it to be listed; and
- iii) all other information or that portion which caused it to be listed, excluding any copies of a United States patent application.

In compliance with 37 CFR 1.98(a)(1), a list of all patents, publications, applications or other information submitted for consideration by the Office is hereby provided by way of the attached Form PTO-1449.

It is respectfully requested that the information be expressly considered by the Examiner and that the references be made of record and appear among the "References Cited" on any patent to issue therefrom.

BEST AVAILABLE COPY

The Patent Office is hereby authorized to charge any deficiency, or credit any overpayment in fees to Deposit Account Number 19-2550.

Respectfully submitted,

SAAED GAZOR

Dated: October 22, 2004

David M. Walters Reg. No. 53,904 Smart & Biggar

P.O. Box 2999, Station D 55 Metcalfe Street, Suite 900

Ottawa, Ontario Canada K1P 5Y6

Telephone: (613) 232-2486

Fax: (613) 232-8440

Encls.:

Form PTO-1449

All references listed on Form PTO-1449

Acknowledgement Card

FORM PTO-1448 (REV. 7-80) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF PUBLICATIONS CITED BY APPLICANT

applicant.

(Use several sheets if necessary)

Sheet 1 of 2

ATTY. DOCKET NO. 73674-4

SERIAL NO. 10/736,697

APPLICANT

Gazor, Saeed

FILING DATE

GROUP

					December 17, 2003		3632	
			U.S. PATENT DOC	UMENTS				
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME		CLASS	FILING DATE SUBCLASS IF APPROP	RIATE	
			FOREIGN PATENT DO	OCUMENTS				
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	S YES	NO	
•	OTHER	R PUBLICATION	ONS (Including Author,	Title, Date, Pertine	ent Pages, i	Etc.)		
1	ÄNGEBY, J. "	ÄNGEBY, J. "Estimating Signal Parameters Using the Nonlinear Instantaneous Least Squares Approach" Transactions on Signal Processing. 48(10): 273 2732. (Oct. 2000).						
2	BARKAT, B. " of Multiplicativ	Instantaneous e and Additive	s Frequency Estimation Noise". IEEE Transac	of Nonlinear Freq tions on Signal Pr	uency-Mod ocessing.	ulated Signals in the 49 (10): 2214-2222 (C	Presence Oct. 2001).	
3		BENIDIR, M., et al. "Polynomial Phase Signal Analysis Based on the Polynomial Derivatives Decompositions" <i>IEEE Transactions on Signal Processing.</i> 47 (7): 1954-1965. (Jul. 1999).						
4 First .	,		ignal Analysis - A Seard Imation. 6.5.1-6.5.8 (A		proach to S	Spectral Analysis". <i>Pi</i>	roc. of	
5			Decomposition of Speed If Computer Engineering		WL Criterio	n". <i>Proceedings of</i> C	anadian	
6		FAR, R. R., et al. "Amplitude-Phase-Locked-Loop Design Using MWL Criterion Student Competition Paper". Proceedings of IEEE Canadian Conference on Electrical and Computer Engineering. (2004).						
7	•	GAZOR, S. "Adaptive Maximum Windowed Likelihood Multi-Component AM-FM Signal Decomposition". <i>IEEE Transactions on Speech and Audio Processing, T-SA-00314-2003.</i> (Jul. 2004).						
8	• •	GOLDEN, S., et al. "Maximum Likelihood Estimation, Analysis and Applications of Exponential Polynomial Signals". <i>IEEE Transactions on Signal Processing</i> . 47 (6): 1493-1501. (Jun. 1999).						
9	KAY, S., <i>et al.</i> 1946. (Jul. 20		nood Frequency Estima	tion". <i>IEEE Trans</i>	actions on S	Signal Processing. 4	8 (7): 1937	
Examiner					Date Co	nsidered		
* EXAMINER:	Initial if referer	nce considere	d, whether or not citatio	n is in conformand	ce with MPE s form with	P 609; Draw line thronext communication	ough to	

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. PATENT AND TRADEMARK OFFICE 10/736,697 (REV. 7-80) 73674-4 APPLICANT LIST OF PUBLICATIONS CITED BY APPLICANT Gazor, Saeed (Use several sheets if necessary) FILING DATE **GROUP** December 17, 2003 3632 KUMARESAN, R., et al. "RISC: Improved Costas Estimator-Predictor Filter Bank for Decomposing Multi-10 Component Signals". Seventh SP Workshop on Statistical Signal and Array Processing. Quebec City. 207-210 (Jun. 1994). LU, S., et al. "Nonlinear Modeling and Processing of Speech Based on Sums of AM-FM Formant Models". 11 IEEE Transactions on Signal Processing. 44(4): 773-782 (Apr. 1996). MACLEOD, M. D. "Fast Nearly ML Estimation of the Parameters of Real or Complex Single Tones or Resolved 12 Multiple Tones". IEEE Transactions on Signal Processing. 46(1): 141-148. (Jan. 1998). 13 MUKHOPADHYAY, S., et al. "Parametric Modeling of Non-stationary Signals: A Unified Approach". Signal Processing. 60: 135-152. (1997). NEHORAI, A., et al. "Adaptive Comb Filtering for Harmonic Signal Enhancement". IEEE Transactions on 14 Acoustics, Speech, and Signal Processing. 34(5): 1124-1138. (Oct. 1986). PAI, W.-C., et al. "Statistical AM-FM Models, Extended Kalman Filter Demodulation, Cramér-Rao Bounds, and 15 Speech Analysis". IEEE Transactions on Signal Processing 48(8): 2300-2313. (Aug. 2000). 16 STOICA, P., et al. "Maximum Likelihood Estimation of the Parameters of Multiple Sinusoids from Noisy Measurements". IEEE Transactions on Acoustics, Speech, and Signal Processing. 37(3): 378-392. (Mar. 1989). 17 STREIT, R. L., et al. "Frequency Line Tracking Using Hidden Markov Models". IEEE Transactions on Acoustics, Speech, and Signal Processing, 38(4): 586-598. (Apr. 1990). TURMON, M. J., et al. "Maximum Likelihood Estimation of Complex Sinusoids and Toeplitz Covariances". IEEE 18 Transactions on Signal Processing. 42(5): 1074-1086. (May 1994). WHITE, L. B. "An Iterative Method for Exact Maximum Likelihood Estimation of the Parameters of a Harmonic 19 Series". IEEE. Transactions on Automatic Control. 38(2): 367-370. (Feb. 1993). 20 WIDROW, B., et al. "Adaptive Noise Cancelling: Principles and Applications". Proc. IEEE. 63 (12): 1692-1716 (Dec 1975). YAP, T.B., et al. "Bayesian Segmentation of AM-FM Texture Images". Conference Record of the Thirty-Fifth 21 Asilomar Conference on Signals, Systems and Computers. 1156-1160. (2001). ZHOU, G., et al. "On Polynomial Phase Signals with Time-Varying Amplitudes". IEEE Transactions on Signal 22 Processing. 44(4): 848-861. (Apr. 1996). Date Considered **Examiner** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through * EXAMINER:

citation if not in conformance and not considered. Include copy of this form with next communication to

applicant.